

What is Claimed:

1. A method for improving virtual device performance in a computer system, said method comprising utilizing a bimodal virtual device that selectively operates as a hardware virtual device in a first mode and as an idealized virtual device in a second mode.

2. The method of claim 1 wherein:

the bimodal virtual device selectively operates as a hardware virtual device when a driver interfacing with said bimodal virtual device has not been designed to interface with said bimodal virtual device operating in said second mode; and

the bimodal virtual device selectively operates as a idealized virtual device when the driver interfacing with said bimodal virtual device has been designed to interface with said bimodal virtual device operating in said second mode.

3. The method of claim 2 wherein the functionality of the second mode extends the functionality of the first mode.

4. The method of claim 2 wherein the functionality of the second mode is independent of the functionality of the first mode.

5. The method of claim 4 wherein the functionality of the second mode disables the functionality of the first mode.

6. The method of claim 4 wherein the functionality of the second mode disables portions of the functionality of the first mode.

7. The method of claim 2 wherein the second mode is enabled through the use of at least one bit in a virtual device register.

8. The method of claim 2 wherein the second mode is enabled through the use of at least one bit in a register specifically created for utilization by one or more virtual devices.

9. The method of claim 2 wherein the second mode is enabled through the use of a prescribed sequence of commands or data that change a value in at least one register.

10. The method of claim 2 wherein

the second mode is enabled through the use of a second mode driver installed within a guest operating system environment; and

if the second mode driver is not present, a first mode driver is instead enabled.

11. A computer system, said computer system comprising a bimodal virtual device that selectively operates as a hardware virtual device in a first mode and as an idealized virtual device in a second mode.

12. The system of claim 11 wherein:

the bimodal virtual device selectively operates as a hardware virtual device when a driver interfacing with said bimodal virtual device has not been designed to interface with said bimodal virtual device operating in said second mode; and

the bimodal virtual device selectively operates as a idealized virtual device when the driver interfacing with said bimodal virtual device has been designed to interface with said bimodal virtual device operating in said second mode.

13. The system of claim 12 wherein the functionality of the second mode extends the functionality of the first mode.

14. The system of claim 12 wherein the functionality of the second mode is independent of the functionality of the first mode.

15. The system of claim 14 wherein the functionality of the second mode disables the functionality of the first mode.

16. The system of claim 14 wherein the functionality of the second mode disables portions of the functionality of the first mode.

17. The system of claim 12 wherein the second mode is enabled through the use of at least one bit in a virtual device register.

18. The system of claim 12 wherein the second mode is enabled through the use of at least one bit in a register specifically created for utilization by one or more virtual devices.

19. The system of claim 12 wherein the second mode is enabled through the use of a prescribed sequence of commands or data that change a value in at least one register.

20. The system of claim 12 wherein
the second mode is enabled through the use of a second mode driver installed within a guest operating system environment; and
if the second mode driver is not present, a first mode driver is instead enabled.

21. A computer system, said computer system comprising a virtual machine environment and a bimodal virtual device that selectively operates as a hardware virtual device in a first mode and as an idealized virtual device in a second mode with said virtual machine environment.

22. The system of claim 21 wherein:

the bimodal virtual device selectively operates as a hardware virtual device when a driver interfacing with said bimodal virtual device has not been designed to interface with said bimodal virtual device operating in said second mode; and

the bimodal virtual device selectively operates as a idealized virtual device when the driver interfacing with said bimodal virtual device has been designed to interface with said bimodal virtual device operating in said second mode.

23. The system of claim 22 wherein the functionality of the second mode extends the functionality of the first mode.

24. The system of claim 22 wherein the functionality of the second mode is independent of the functionality of the first mode.

25. The system of claim 24 wherein the functionality of the second mode disables the functionality of the first mode.

26. The system of claim 24 wherein the functionality of the second mode disables portions of the functionality of the first mode.

27. The system of claim 22 wherein the second mode is enabled through the use of at least one bit in a virtual device register.

28. The system of claim 22 wherein the second mode is enabled through the use of at least one bit in a register specifically created for utilization by one or more virtual devices.

29. The system of claim 22 wherein the second mode is enabled through the use of a prescribed sequence of commands or data that change a value in at least one register.

30. The system of claim 22 wherein
the second mode is enabled through the use of a second mode driver installed within a guest operating system environment; and
if the second mode driver is not present, a first mode driver is instead enabled.

31. A computer-readable medium comprising computer-readable instructions, said computer-readable instructions comprising instructions for a bimodal virtual device to selectively operate as a hardware virtual device in a first mode and as an idealized virtual device in a second mode.

32. The computer-readable instructions of claim 21 further comprising instructions for:

the bimodal virtual device to selectively operate as a hardware virtual device when a driver interfacing with said bimodal virtual device has not been designed to interface with said bimodal virtual device operating in said second mode; and

the bimodal virtual device to selectively operate as a idealized virtual device when the driver interfacing with said bimodal virtual device has been designed to interface with said bimodal virtual device operating in said second mode.

33. The computer-readable instructions of claim 32 further comprising instructions for the functionality of the second mode to extend the functionality of the first mode.

34. The computer-readable instructions of claim 32 further comprising instructions for the functionality of the second mode that are separate and distinct from instructions for the functionality of the first mode.

35. The computer-readable instructions of claim 34 further comprising instructions for the second mode to disable the functionality of the first mode.

36. The computer-readable instructions of claim 34 further comprising instructions for the second mode to disable portions of the functionality of the first mode.

37. The computer-readable instructions of claim 32 further comprising instructions for enabling the second mode through the use of at least one bit in a virtual device register.

38. The computer-readable instructions of claim 32 further comprising instructions for enabling the second mode through the use of at least one bit in a register specifically created for utilization by one or more virtual devices.

39. The computer-readable instructions of claim 32 further comprising instructions for enabling the second mode through the use of a prescribed sequence of commands or data that change a value in at least one register.

40. The computer-readable instructions of claim 32 further comprising instructions for:
enabling the second mode through the use of a second mode driver installed within a guest operating system environment; and

if the second mode driver is not present, enabling a first mode through the use of a first mode driver.

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